

Title (en)
SELF-DECODABLE RETRANSMISSION FOR LDPC CODE BASED HARQ SYSTEMS

Title (de)
SELBSTDECODIERBARE NEUÜBERTRAGUNG FÜR HARQ-SYSTEME AUF LDPC-CODEBASIS

Title (fr)
RETRANSMISSION AUTO-DÉCODABLE DE SYSTÈMES HARQ BASÉS SUR UN CODE LDPC

Publication
EP 3665781 A1 20200617 (EN)

Application
EP 18759830 A 20180809

Priority
• US 201762544760 P 20170811
• US 201816058196 A 20180808
• US 2018046083 W 20180809

Abstract (en)
[origin: WO2019032881A1] Methods, systems, and devices for wireless communication are described. In some examples, a wireless device (e.g., a user equipment (UE) or a base station) may encode a codeword from a set of information bits using an LDPC code. The wireless device may then transmit multiple versions of the codeword to improve the chances of the codeword being received. In some aspects, the wireless device may use the techniques herein to generate self-decodable redundancy versions of the codeword to be transmitted to the receiving device. Accordingly, a receiving device may be able to identify information bits from one or more redundancy versions of the codeword even if the receiving device failed to receive an original transmission of the codeword. Specifically, the wireless device may re-order bits in an encoded bit stream for a retransmission before storing these bits in a circular buffer. Once the bits are re-ordered and stored in the circular buffer, the wireless device may select bits from the buffer and transmit the selected bits to the receiving device. By re-ordering bits in the encoded bit stream, the wireless device may ensure that sets of information bits are distributed evenly across the selected bits. Accordingly, when the wireless device selects bits from the circular buffer for the retransmission, the retransmission may include sufficient systematic bits to enable the retransmission to be decoded by the receiving device with or without being combined with an original transmission.

IPC 8 full level
H03M 13/11 (2006.01); **H03M 13/27** (2006.01)

CPC (source: EP US)
H03M 13/1102 (2013.01 - US); **H03M 13/116** (2013.01 - EP US); **H03M 13/1185** (2013.01 - EP US); **H03M 13/27** (2013.01 - EP US); **H03M 13/618** (2013.01 - EP US); **H03M 13/6306** (2013.01 - EP US); **H03M 13/6393** (2013.01 - EP US); **H04L 1/0041** (2013.01 - EP US); **H04L 1/0057** (2013.01 - EP US); **H04L 1/08** (2013.01 - US); **H04L 1/1819** (2013.01 - EP US); **H04L 1/1835** (2013.01 - EP US); **H03M 13/2742** (2013.01 - EP US); **H04L 1/00** (2013.01 - US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2019032881 A1 20190214; CN 111034056 A 20200417; CN 111034056 B 20240102; EP 3665781 A1 20200617; EP 3665781 B1 20241030; TW 201921847 A 20190601; TW I790269 B 20230121; US 10735134 B2 20200804; US 2019052400 A1 20190214

DOCDB simple family (application)
US 2018046083 W 20180809; CN 201880051500 A 20180809; EP 18759830 A 20180809; TW 107127775 A 20180809; US 201816058196 A 20180808